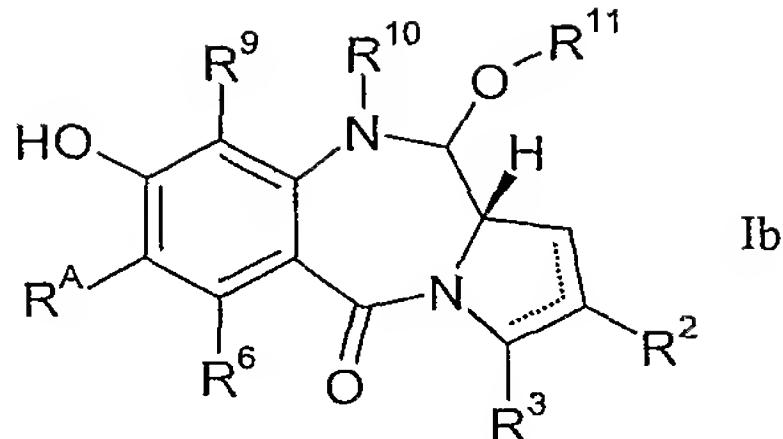
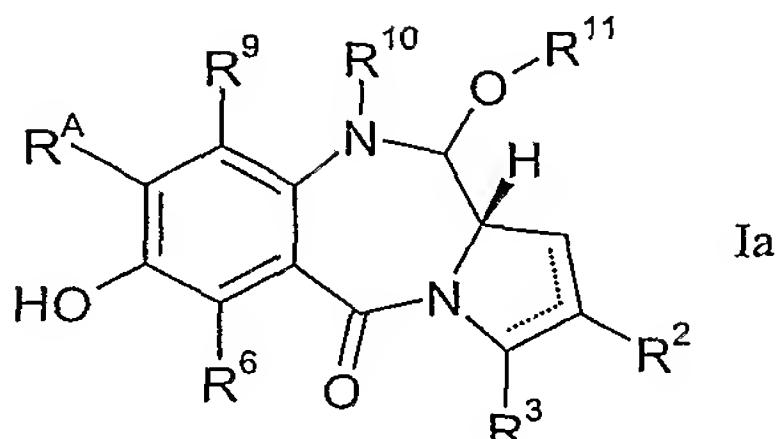


CLAIMS

1. A compound of formula Ia or Ib:



5 and salts, solvates, and chemically protected forms thereof, wherein:

the dotted lines indicate the optional presence of a double bond between C1 and C2 or C2 and C3;

10 R² and R³ are independently selected from -H, =O, =CH₂, -CN, -R, OR, halo, =CH-R, O-SO₂-R, CO₂R and COR;

R⁶ and R⁹ are independently selected from H, R, OH, OR, SH, SR, NH₂, NHR, NRR', nitro, Me₃Sn and halo;

where R and R' are independently selected from optionally substituted C₁₋₁₂ alkyl, C₃₋₂₀ heterocyclyl and C₅₋₂₀ aryl groups;

15 R^A is selected from H, R, OR, SH, SR, NH₂, NHR, NRR', nitro, Me₃Sn and halo;

R¹⁰ is a carbamate-based nitrogen protecting group; and

R¹¹ is an oxygen protecting group.

20 2. A compound according to claim 1, wherein R^A is independently selected from H, OR, SH, SR, NH₂, NHR, NRR' and halo.

3. A compound according to either claim 1 or claim 2, wherein R¹¹ is THP or a silyl oxygen protecting group.

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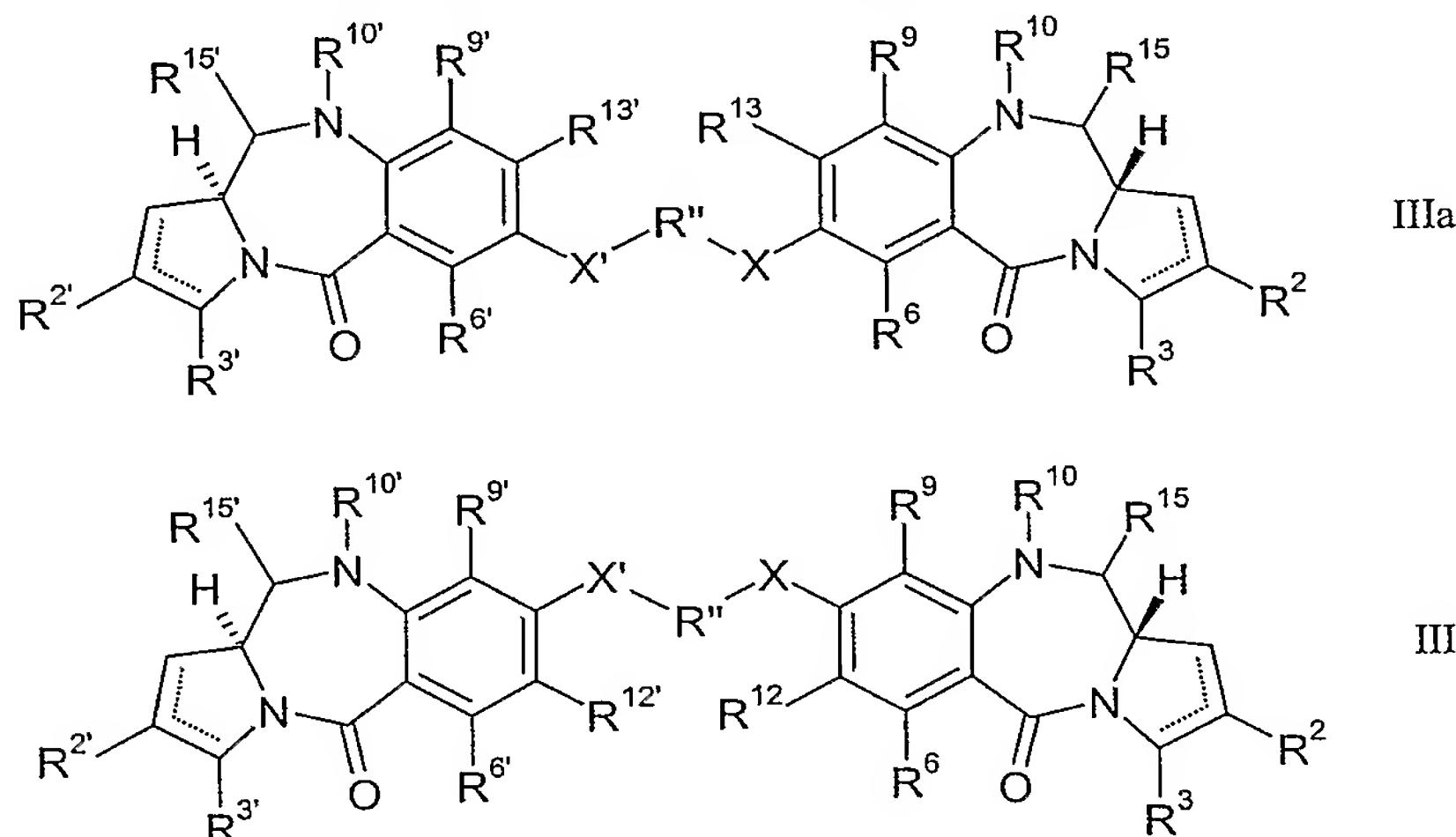
4. A compound according to any of the preceding claims, wherein R¹⁰ is BOC or Troc.

5. A compound according to any one of the preceding claims, wherein R⁹ is H.

6. A compound according to any one of the preceding claims, 5 wherein R² is R.

7. A compound according to any one of the preceding claims, wherein R⁶ is selected from H, OH, OR, SH, NH₂, nitro and halo.

10 8. A compound of formula IIIa or IIIb:



and salts and thereof, wherein:

the dotted lines indicate the optional presence of a double bond between C1 and C2 or C2 and C3;

15 R² and R³ are independently selected from -H, =O, =CH₂, -CN, -R, OR, halo, =CH-R, O-SO₂-R, CO₂R and COR;

R⁶, R⁹, R¹² and R¹³ are independently selected from H, R, OH, OR, SH, SR, NH₂, NHR, NRR', nitro, Me₃Sn and halo;

20 where R and R' are independently selected from optionally substituted C₁₋₁₂ alkyl, C₃₋₂₀ heterocyclyl and C₅₋₂₀ aryl groups;

R¹⁰ is a carbamate-based nitrogen protecting group and R¹⁵ is either O-R¹¹, wherein R¹¹ is an oxygen protecting group, or OH, or R¹⁰ and R¹⁵ together form a double bond between N10 and C11; and

where R'' is a C₃₋₁₂ alkylene group, which chain may be interrupted by one or more heteroatoms, e.g. O, S, NH, and/or aromatic rings, and each X is independently selected from O, S, or NH; and R^{2'}, R^{3'}, R^{6'}, R^{9'}, R^{10'}, R^{12'}, R^{13'} and R^{15'} are all independently selected from the same lists as previously defined for R², R³, R⁶, R⁹, R¹⁰, R¹², R¹³ and R¹⁵ respectively.

9. A compound according to claim 8, wherein the dimers are linked at the C8 position.

10

10. A compound according to claim 8, wherein the dimers are linked at the C7 position.

11. A compound according to either claim 9 or claim 10, wherein -X'-R''-X- of formula **IIIa** or **IIIb** is -O-(CH₂)_n-O-, where n is 3 to 12.

12. A compound according to claim 11, wherein n is 8 to 12.

20 13. A compound according to claim 12, wherein n is 8 to 11.

14 A compound according to claim 13, wherein n is 8 to 10.

15. A compound according to claim 14, wherein n is 8 or 9.

25

16. A compound according to any one of claims 8 to 15, wherein R¹⁵ is O-R¹¹ and R¹¹ is THP or a silyl oxygen protecting group.

30 17. A compound according to any one of claims 8 to 16, wherein R¹⁰ is BOC or Troc.

18. A compound according to any one of claims 8 to 15, wherein R¹⁰ and R¹⁵ together form a double bond between N10 and C11.

19. A compound according to any one of claims 8 to 18, wherein R⁹ is H.

20. A compound according to any one of claims 8 to 19, wherein R² is R.

21. A compound according to any one of claims 8 to 20, wherein R⁶ is selected from H, OH, OR, SH, NH₂, nitro and halo.

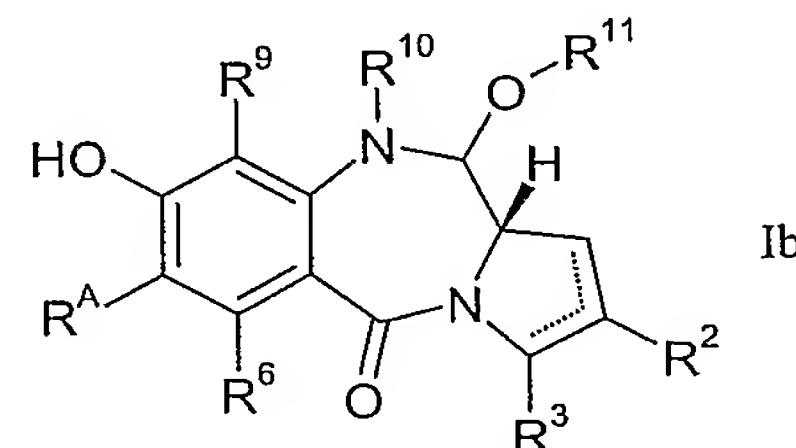
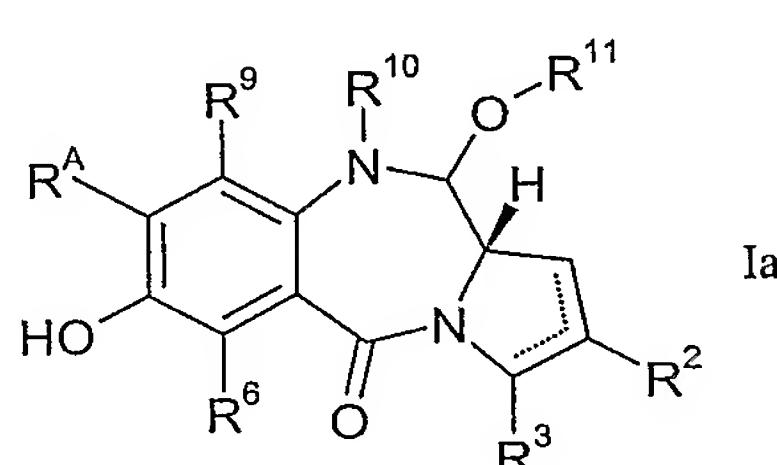
22. A compound according to any one of claims 8 to 21 for use in a method of therapy.

23. A pharmaceutical composition containing a compound of any one of claims 8 to 21, and a pharmaceutically acceptable carrier or diluent.

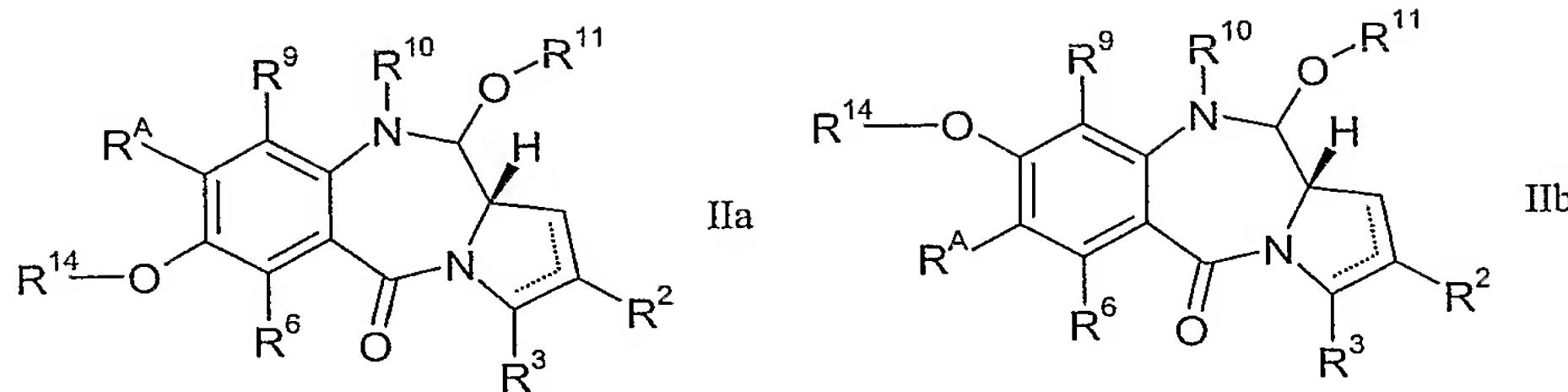
24. Use of a compound according to any one of claims 8 to 21 in the manufacture of a medicament for treating a proliferative disease.

25. A method of treatment of a proliferative disease, comprising administering to a subject in need of treatment a therapeutically-effective amount of a compound of any one of claims 8 to 21.

26. A method of synthesising a compound of formula Ia or Ib:



from a compound of formula IIa or IIb respectively:



wherein:

the dotted lines indicate the optional presence of a double bond between C1 and C2 or C2 and C3;

R² and R³ are independently selected from -H, =O, =CH₂, -CN, -R, OR, halo, =CH-R, O-SO₂-R, CO₂R and COR;

R⁶ and R⁹ are independently selected from H, R, OH, OR, SH, SR, NH₂, NHR, NRR', nitro, Me₃Sn and halo;

where R and R' are independently selected from optionally substituted C₁₋₁₂ alkyl, C₃₋₂₀ heterocyclyl and C₅₋₂₀ aryl groups;

R^A is selected from H, R, OR, SH, SR, NH₂, NHR, NRR', nitro, Me₃Sn and halo;

R¹⁰ is a carbamate-based nitrogen protecting group;

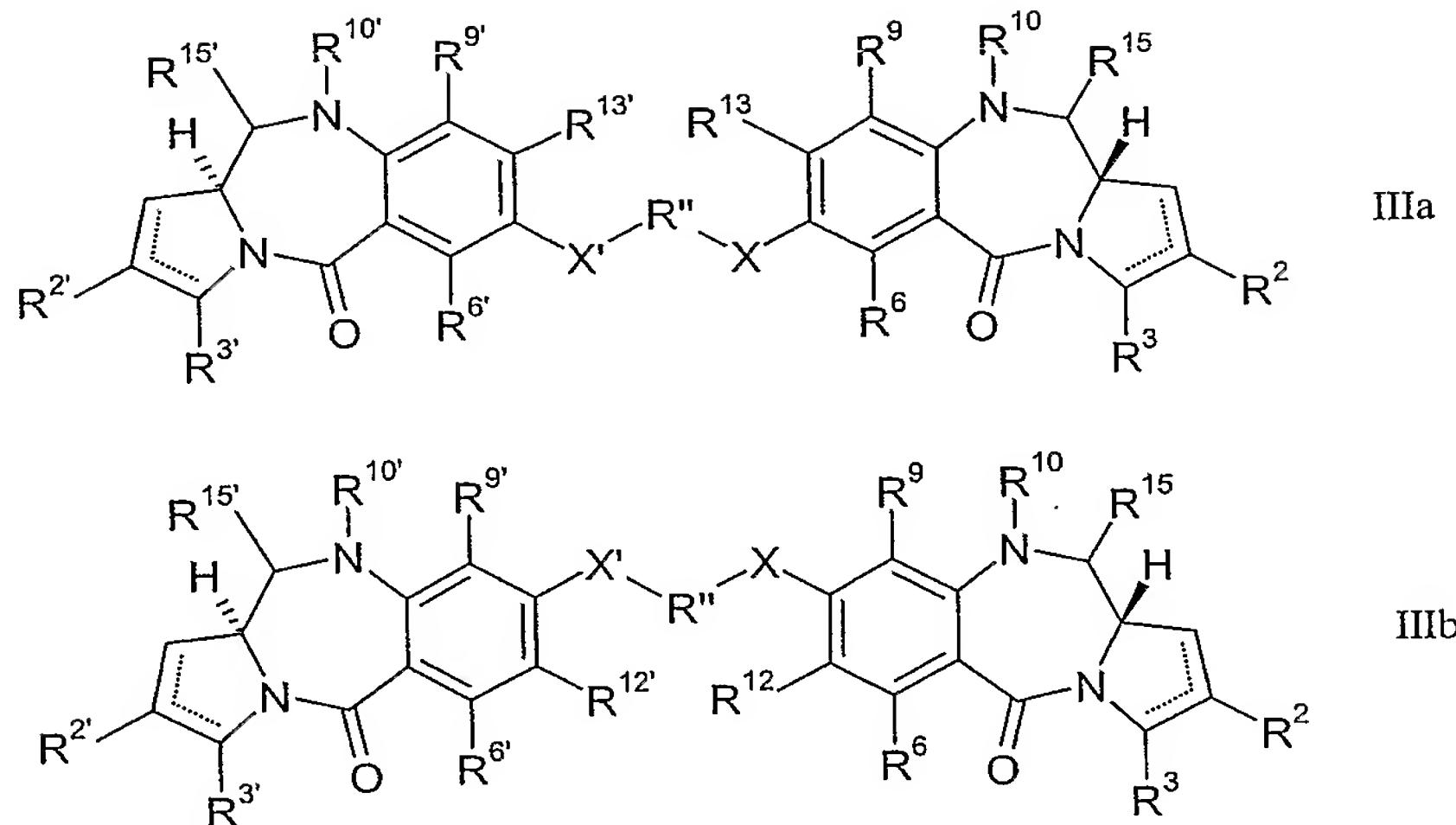
R¹¹ is an oxygen protecting group; and

R¹⁴ is an oxygen protecting group orthogonal to R¹¹.

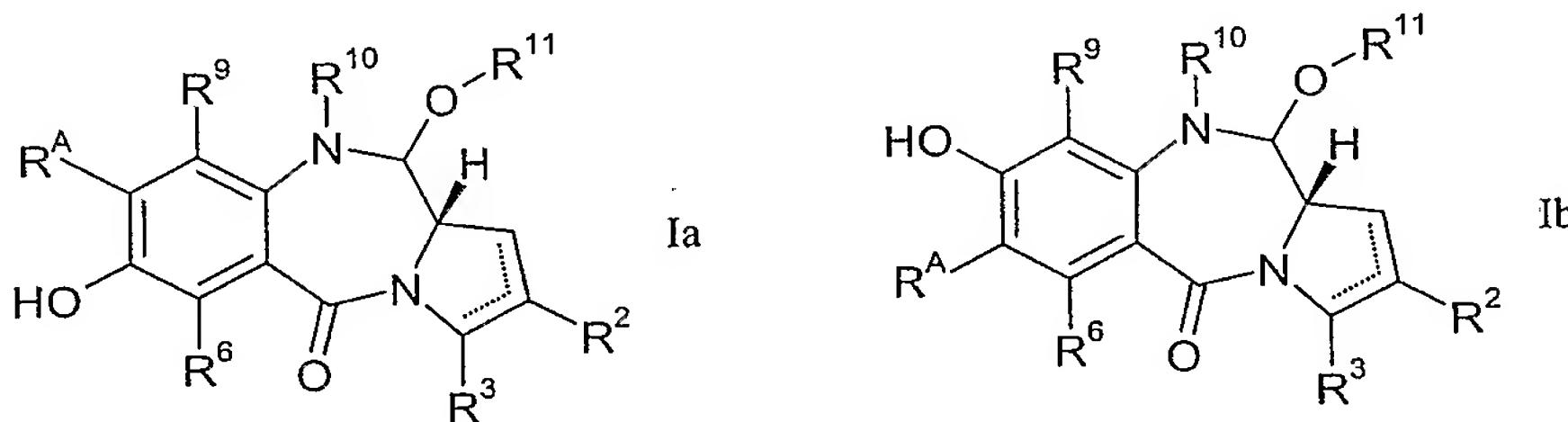
27. A method according to claim 26, wherein R¹⁴ is benzyl ether and R^A is OMe or H.

28. A method according to either claim 26 or claim 27, wherein R¹¹ is THP or a silyl oxygen protecting group.

29. A method of synthesising a compound of formula **IIIA** or **IIIB**:



or a solvate thereof, from a compound of formula Ia or Ib
respectively:



5 wherein:

the dotted lines indicate the optional presence of a double bond between C1 and C2 or C2 and C3;

R² and R³ are independently selected from -H, =O, =CH₂, -CN, -R, OR, halo, =CH-R, O-SO₂-R, CO₂R and COR;

10 R⁶, R⁹, R¹² and R¹³ are independently selected from H, R, OH, OR, SH, SR, NH₂, NHR, NRR', nitro, Me₃Sn and halo; where R and R' are independently selected from optionally substituted C₁₋₁₂ alkyl, C₃₋₂₀ heterocyclyl and C₅₋₂₀ aryl groups;

15 R^A is selected from H, R, OR, SH, SR, NH₂, NHR, NRR', nitro, Me₃Sn and halo;

R¹⁰ is a carbamate-based nitrogen protecting group and R¹⁵ is either O-R¹¹, wherein R¹¹ is an oxygen protecting group, or OH, or R¹⁰ and R¹⁵ together form a double bond between N10 and C11; and where R'' is a C₃₋₁₂ alkylene group, and each X is independently selected from O, S, or NH; and

20

$R^{2'}$, $R^{3'}$, $R^{6'}$, $R^{9'}$, $R^{10'}$, $R^{12'}$, $R^{13'}$ and $R^{15'}$ are all independently selected from the same lists as previously defined for R^2 , R^3 , R^6 , R^9 , R^{10} , R^{12} , R^{13} and R^{15} respectively.

5 30. A method according to claim 29, comprising the step of either:

(a) reacting a compound of formula **Ia** or **Ib** with a compound having the formula $Y-R''-Y'$ to yield a compound of formula **IIIa** or **IIIb**; or

10 (b) (i) reacting a compound of formula **Ia** or **Ib** with a compound having the formula $Y-R''-YProt$, and

(ii) converting $YProt$ in the reaction product from (i) to Y' , and

15 (iii) reacting the product from (ii) with a compound of formula **Ia** or **Ib** to yield a compound of formula **IIIa** or **IIIb**;

wherein:

Y , Y' are independently selected from OH, I, Br, Cl, mesylate or tosylate;

20 $YProt$ is a precursor to Y' or a chemically protected form of Y' having a protecting group that is orthogonal to R^{10} and R^{11} .

31. A method according to claim 30, wherein Y and Y' are I.

32. A method according to claim 30, wherein Y is OH and $YProt$ is

25 O-benzyl.